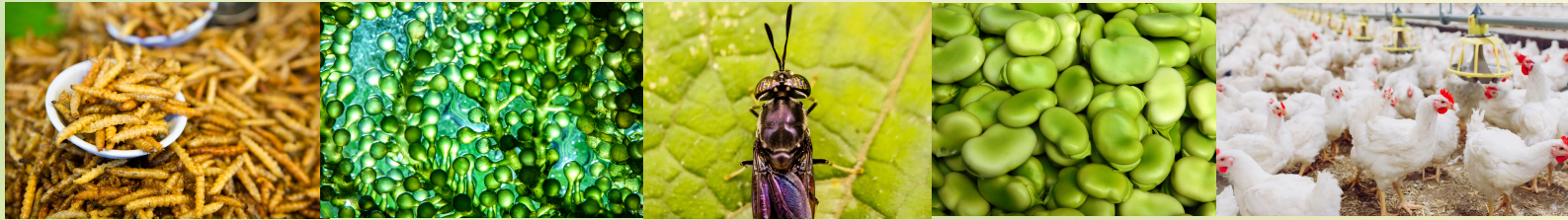




CIPROMED

Circular and Inclusive utilisation of alternative PROteins in the MEDiterranean value chains



Production of sustainable, healthier, more environmental-friendly, affordable and competitive food and feed product formulations available for all.

The main objective of the CIPROMED project is to enhance the stability and resilience of Mediterranean agri-food systems. This will be achieved by utilizing local crops and agri-industrial residues (such as brewer's spent grain and oilseed presscakes) to produce proteins through innovative methods involving insects, legumes, microalgae, and fermentation. The project adopts a multi-discipline approach, focusing on increasing protein yields from agri-industrial residues and side-streams. Additionally, insect frass will be repurposed as a fertilizer for legume cultivation. Protein extraction from various sources will be conducted sustainably, with an emphasis on nutritional, functional, and safety attributes.

CIPROMED will use a multi-actor approach, where insects and microalgae will be produced exploiting agri-industrial residues and extraction side-streams as substrates and applying innovative rearing and cultivation techniques to attain higher protein yields. To close the loop, insect frass will be used as soil fertiliser for legume (lupins and faba beans) production. High quality protein ingredients from agri-industrial residues, insects, legumes and microalgae will be extracted for food

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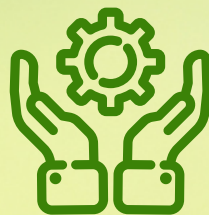
and feed applications via economically and environmentally sustainable extraction processes.

To achieve circularity, the residues generated by the extraction processes will be integrated in diets formulated for insect rearing and heterotrophic microalgae cultivation, minimizing the residual amounts. Microbial fermentation will be used to enhance the range, stability and health promoting functionality of the new proteins.

All protein ingredients will be fully characterized, in terms of:



Nutritional Value



Functionality



Biological Properties



Safety

The project aims to formulate and validate new food and feed products containing these novel proteins through advanced processing technologies, promoting circularity by minimizing waste and maximizing functionality.

Challenge

The challenge that the CIPROMED project aims to solve is the heavy reliance on protein imports in current European agricultural production systems, particularly in the Mediterranean Region. This dependency on external protein sources leaves these systems vulnerable, especially in the face of issues like drought and ecological deficits. These challenges threaten the self-sufficiency of traditional protein supply chains. To address this challenge, CIPROMED seeks to establish efficient, viable, and locally produced alternative protein sources that can enhance the stability and resilience of Mediterranean agri-food production systems. This involves utilizing local crops and agri-industrial residues, as well as innovative techniques involving insects, legumes, microalgae, and fermentation to produce proteins that can be used in both agri-food and feed sectors

Solution

The CIPROMED project presents a holistic solution to address Europe's heavy reliance on protein imports, particularly in the Mediterranean Region. It focuses on exploiting the untapped potential within agricultural residues, side-streams, and wasted food. With around 27% of global agricultural production going unused, equivalent to 1.6 billion tons of biomass valued at \$750 billion USD, and one-third of food wasted, there is a significant resource opportunity. CIPROMED's integrated approach involves recovering proteins from agri-industrial side-streams and biomass like brewer's spent grain, oilseed presscakes, insects, microalgae, and legumes. These proteins will be sustainably integrated into animal production, aquaculture, and human consumption, aligning with circular economy principles. The project emphasizes eco-friendly protein production through innovative techniques, including insect farming, legume utilization, microalgal protein cultivation, and fermentation technology. Ultimately, CIPROMED aims to enhance sustainability, reduce imports, and bolster the resilience of Mediterranean agri-food systems.



Kick - Off Meeting

Cipromed project's kick-off meeting took place on June 5th - 6th in the beautiful city of Volos, Greece, hosted by the University of Thessaly.





UNIVERSITY OF THESSALY

UTH is the project coordinator (WP1), leads WP2 and participates in WPs 6 and 7. UTH has all the necessary expertise (innovative research on entomology and particularly optimisation of insect rearing protocols) and well-equipped facilities e.g., laboratory with cutting-edge equipment (molecular unit, insect rearing units etc.), broad collection of rearings of >30 insect species and >100 strains to fully achieve project objectives.

www.uth.gr

Meet the Team

Project Coordinator
Christos Athanasiou





FLYING SPARK



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PRIMA PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

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